

REMARKS

The present amendment under 37 CFR 1.111 is being submitted in conjunction with a Request for Continued Examination of the above-referenced application under 37 CFR 1.114, to permit entry of: (i) the remarks set forth herein; and (ii) a Supplemental Information Disclosure Statement under 37 CFR 1.97. Applicant further petitions for an extension of three months from the date on which the shortened statutory period for response to the Final Rejection dated December 23, 2005 was due (i.e., March 23, 2006) and submits herewith the fee required under 37 CFR 1.17(a)(3). In view of the extension of time thus requested, it is submitted that the present amendment is timely filed and that the present amendment and the Supplemental Information Disclosure Statement are properly to be considered.

Applicant's invention, as recited by presently pending claims 1-7, 9, 11-23, 25-29, and 31-33, as amended, provides a nonwoven, fibrous mat comprising a blend of a major portion composed of chopped glass fibers having an average fiber diameter ranging from about 8 to 17 μm and a minor portion composed of fine staple fibers having an average fiber diameter of less than about 5.5 μm . The minor portion is composed of glass or mineral fibers and comprises about 1-30 percent of the dry weight of the web. Also provided is a gypsum board faced with such a mat. In various embodiments, the gypsum board exhibits a combination of desirable structural and functional features that render it fire resistant and easily painted or otherwise given an aesthetically pleasing finish after installation with a minimum of surface

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preparation required. The mat has a high permeability, permitting easy extraction of excess water ordinarily present during slurry-based manufacture of gypsum or other hydraulic set board. Surprisingly and unexpectedly, gypsum board faced in accordance with the invention with the present nonwoven glass fiber mat, has a smoother surface than boards made with known mats employing fibers having either larger or smaller average diameter. It is especially surprising and significant that the aforementioned fiber blend results in smoother board than would otherwise be obtained with fibers having a single average diameter.

Claim 30 stands withdrawn as being directed to a non-elected invention.

Claims 1-7, 9, 12-15, 17-18, 29, and 33 stand rejected under 35 USC 102(b) as being anticipated by US Patent 5,389,716 to Graves, which discloses a binder composition for fibrous mats that is said to be fire resistant when cured. The mats are said to be suitable for a backing layer for gypsum.

The Examiner has referred to paragraph 5 of the Office Action of May 31, 2005, wherein claims 1-7, 9, 12-15, 18, 24, 29, and 33 were rejected under 35 USC 102(b) as being anticipated by Graves, and paragraph 4 of the Office Action dated July 20, 2005, as providing details for the present rejection. In turn, paragraph 5 of the May 31, 2005 rejection referred to a rejection in the Office Action dated March 8, 2005. Applicant infers that reference to the February 3, 2005 Office Action was intended. A review of the file history indicates that no

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office action was issued bearing the March 8 date, which in fact was the date of applicant's response to the February 3 Office Action.

In the February 3, 2005 Office Action, the Examiner has pointed to disclosure of fibrous mat comprising mineral wool fibers having a diameter between 2 and 6 microns (col. 9, lines 50-60) that may be in part substituted with glass fibers (col. 11, lines 33-37). As noted by the Examiner, Graves discloses (at col. 11, lines 54-60) that the weight ratio of wool to glass fibers may range from about 0:1 to 1:0. That is to say, the Graves mat may comprise exclusively glass fibers or mineral wool, or a combination in any ratio. The Examiner purports that in one embodiment the mineral wool fibers in the Graves mat can comprise a portion of 1-30 percent of the mat: "Therefore, in one embodiment, the mineral wool fibers can comprise a portion of 1-30 percent of the mat meeting Applicant's requirement." (Office Action of February 3, 2005, page 9, emphasis added.)

Of course, it is a truism that a range of 1-30% falls within a range of 0-100%. But significantly, the Examiner has not pointed to disclosure in Graves of any range even approximating 1-30%, let alone any mat species having fiber sizes and amounts falling within the limits set forth by applicant's independent claims 1, 29, and 33, or even any disclosure or suggestion of the desirability of a mat containing 1-30 percent mineral wool fibers. Applicant respectfully notes that all of the six species provided by Graves (Table 1) employ a wool fiber to glass fiber ratio of 90/10 or 80/20, said amounts of wool fiber (80-90%) being far larger than the 1-30 percent delineated by claims 1, 29, and 33.

Applicant respectfully but emphatically maintains that Graves falls far short of the specificity of disclosure that would be required to properly ground a *prima facie* anticipation of claims 1-7, 9, 12-15, 17-18, 29, and 33. Absent disclosure of every feature in a single reference, either explicitly or implicitly, such a rejection is impermissible, as the Federal Circuit has repeatedly held to be axiomatic. See, e.g., in the context of chemical arts, *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 51 USPQ2d 1943 (Fed. Cir. 1999). [“To anticipate a patent claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently...When a patent claims a chemical composition in terms of ranges of elements, any single prior art reference that falls within each of the ranges anticipates the claim; a single prior art species within the patent’s claimed genus reads on the generic claim and anticipates. *Id.* at 1346.]

Further, it is established law that a reference that describes subject matter delineated by a numerical range of composition does not *per se* anticipate a claim delineating a different range merely because of the overlap of such ranges. While the existence of a prior art species falling within a claimed generic range has been held to anticipate the claimed genus, in the present instance no species of Graves has been identified that falls within the claimed ranges. Absent such an identified species, a case-specific factual analysis is required to establish possible anticipation. *Ex parte Cole*, 2001 WL 1918535 (BPAI, 2001), quoting *Ex parte Lee*, 31 USPQ2d 1105, 1107 (BPAI, 1993). Explaining the nature of the factual analysis, the Board of Patent Appeals and Interferences required a determination of the specificity of

disclosure. [“Where, as here, a reference describes a class of compositions, the reference must be analyzed to determine whether it describes a composition(s) with sufficient specificity to constitute an anticipation under the statute. *Ex parte Lee*, supra, at 1106-1107, emphasis added, citing *In re Schaumann*, 572 F.2d 312, 197 USPQ 5 (CCPA 1978).]

Recently, the Federal Circuit has applied similar reasoning in regard to process parameter limitations, holding that a prior art disclosure of a process temperature range of 100-500°C did not anticipate a claim limitation of 330 to 450°C. [“Given the considerable difference between the claimed range and the range in the prior art, no reasonable fact finder could conclude that the prior art describes the claimed range with sufficient specificity to anticipate this limitation of the claim.” *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991, 999, 2006 U.S. App. LEXIS 7180, 78 U.S.P.Q.2d (BNA) 1417 slip op. at 22 (Fed. Cir. 2006)]. Applicant respectfully submits that the law established by the *Atofina* court is apposite the facts in the present instance. That is to say, the *Atofina* court’s holding that mere disclosure of a temperature range overlapping a claimed temperature range is not anticipatory is also applicable to applicant’s claimed ranges of diameters and relative amounts of different fibers, which at best fall within much wider disclosed ranges.

In the present instance, the Examiner has alleged that “Graves teaches each and every limitation.” Applicant respectfully but emphatically disagrees. Clearly, the particular range limitations of applicant’s claims are nowhere to be found in Graves. Applicant submits that in light of the analysis of temperature ranges in *Atofina*, no reasonable fact-finder in the

present instance could regard applicant's 1-30% range as being disclosed by Graves's 0-100% range, *a fortiori* since Graves's species all fall within a range of 80-90%.

Moreover, applicant respectfully submits that the fact-specific analysis required under *Cole*, *Lee*, and *Atofina* has not been provided. That is to say, the Examiner's analysis fails even to address how present claim 1, which delineates a non-woven fibrous mat characterized by a particular blend of fibers having far more specific and narrow ranges than any mat generally or specifically disclosed or suggested by Graves, rises to the level of specificity required to constitute anticipation under the Federal Circuit's controlling case law.

In pertinent part of the Office Action of February 3, 2005, the Examiner has pointed to Graves as follows:

"As to claims 1, 29, and 33, Graves teaches that the fibrous mat can comprise a binder composition and a mixture of glass and mineral fibers (col. 4, lines 44-50). The fibrous mat comprises mineral wool fibers having a diameter between 2 and 6 microns (col. 9, lines 50-60) which may be in part substituted with glass fibers (col. 11, lines 33-37) having a diameter between 3 and 30 microns (col. 10, lines 15-25). The glass fibers may be chopped glass fiber strands having a length between 1 mm and 75 mm (col. 10, lines 15-25). The Examiner equates the glass fibers to Applicant's 'chopped continuous glass fibers' and the mineral wool fibers to Applicant's 'fine staple fibers.' The weight ratio of the wool fibers to the glass fibers may range from 0:1 to 1:0 (col. 11, lines 54-60) and the binder comprises 3-40% by weight of the mat (col. 4, lines 34-40)." (Office Action of February 3, 2005, paragraph 11, page 9)

Applicant respectfully maintains that the admitted disclosure of Graves differs strikingly from the subject matter recited by applicant's claims 1, 29, and 33, as set forth in the Table below:

Claim Feature	Instant Application	Graves
chopped glass fiber (average diameter)	8-17 μm	3-30 μm
fine staple fiber (average diameter)	< 5.5 μm	2-6 μm
proportion of fine staple fibers	1-30%	0-100%

Clearly, Graves does not expressly recite any of applicant's numerical ranges, instead teaching ranges that are far broader with respect to each of these indicia. The 1-30% range does not appear whatsoever in Graves. Neither does the Examiner provide any objective basis on which it could be concluded that species within the range delineated by Graves but outside the claimed ranges would inherently share the same properties. Nothing in Graves or in other art cited by the Examiner establishes that a person having ordinary skill in the art would particularly select 1-30% of fine staple fibers. Whereas applicant's mat must contain a blend of fibers of different average diameters, the Graves mat can contain exclusively fibers of one of the types, or any intermediate blend in any proportion. It is thus submitted that a demonstration of aforementioned specificity required under *Cole*, *Lee*, and *Atofina* is lacking, rendering any finding of anticipation of independent claims 1, 29, and 33 improper.

While Graves admittedly discloses certain fibrous mats and the use of fibrous mats as backing for gypsum boards, the disclosure falls far short of the specificity required to predicate anticipation of the gypsum board recited by claims 1 and 29 and the hydraulic set board of claim 33. Even less does Graves disclose every feature of claims 2-7, 9, 12-15, 17,

and 18, which depend from claim 1, and are submitted to be novel for at least the same reasons as claim 1.

As noted above, Graves' preferred and more preferred ranges for ratio of wool fibers to glass fibers (1:1 to 9:1 and 7:3 to 9:1, respectively – see col. 11, lines 58-59) require at least half (1:1) and more preferably a substantial preponderance of the smaller wool fibers (i.e. 70-90%), whereas applicant calls for a "minor portion" of the smaller staple fibers. Applicant respectfully notes that the six species provided by Table 1 accord with Graves' express preference, employing a wool fiber to glass fiber ratio of 90/10 or 80/20, said amounts of wool fiber (80-90%) being far larger than the 1-30 percent delineated by claims 1, 29, and 33. It is submitted that these preferred ratios further undermine any allegation that Graves provides the requisite "sufficient specificity" for anticipation of applicant's claimed range.

Moreover, applicant submits that surprising and unexpected results delineated by the instant specification still further rebut any purported conclusion that Graves provides the requisite level of specificity of disclosure. ["If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with 'sufficient specificity' to constitute an anticipation of the claims. The unexpected results may also render the claims unobvious." MPEP 2131.03 (II).]

In the present instance, applicant's claims are directed to narrower ranges than those of the Graves reference and evidence of unexpected results is adduced in the specification. For example, nothing in Graves discloses or suggests a gypsum board having a surface that is aesthetically acceptable when finished by painting. See, e.g., page 6, lines 20-22. Inasmuch as the Examiner has not pointed to other contravening facts, it is submitted that an anticipation rejection is precluded under MPEP 2131.03 (II). In particular, it is submitted that Graves fails even to recognize the particular properties of applicant's claimed mat that render it advantageous for use as a gypsum board facer, including: (i) a high permeability that permits extraction of water during board fabrication without also causing excessive intrusion of the gypsum slurry into and through the facer (page 8, lines 22-25); (ii) a smooth surface of the mat with a surprisingly low content of fine staple fiber (page 9, lines 11-14); and (iii) a smooth surface of the final board product that surprisingly is not well correlated with the smoothness of the mat before board fabrication (page 20, lines 5-7). This beneficial combination of properties arises from the use of mat employing particular fibers having the sizes and relative amounts delineated by applicant's claims. However, the Examiner has not pointed to any disclosure or suggestion of such unexpected benefits in Graves, let alone a disclosure having sufficient specificity to permit a person of ordinary skill even to recognize the subject matter of claims 1-7, 9, 12-15, 17-18, 29, and 33. Even less is there sufficient disclosure to motivate a skilled artisan to construct the recited mat and gypsum board using the particular types and amounts of fibers recited. It is respectfully submitted that a person of

ordinary skill in possession of Graves would not have any basis on which to select the particular non-woven mat used as the facer of applicant's gypsum board, nor any reasonable expectation of success in obtaining the beneficial properties provided thereby.

With respect to the Examiner's contention that applicant has failed to demonstrate any surprising and unexpected benefit of the gypsum board of claim 1 (and claims 2-7, 9, 11-23, and 25-28 dependent thereon), attention is respectfully drawn to the comparison afforded by Example 6 of the specification (page 19, line 15 and following) between gypsum board made with known mat facers (Comparative Example 1) and applicant's boards made with the facers as delineated by claims 1, 29, and 33 (e.g., Examples 3 and 5 set forth in Tables III and IV). Applicant respectfully maintains that these comparisons show improved results that were surprising and unexpected at the time of the invention, thereby specifically providing objective evidence of the non-obviousness of the presently claimed board. As set forth at page 20, lines 5-7, the smoothness of dry cured mat surprisingly and unexpectedly is not indicative of the smoothness of finished board. As a result, it is submitted that Graves' disclosure at col. 12, lines 14-21 regarding the relatively coarser or softer hand of finished mat would incorrectly guide a person of ordinary skill seeking a gypsum or hydraulic set board, and would not be sufficient to motivate the selection, from the vast range of possible fiber combinations disclosed by Graves, of the mat used to face applicant's construction board. It is respectfully submitted that these results fully suffice to establish the novelty and non-obviousness of applicant's claimed subject matter.

It is respectfully submitted that the presence of these advantageous benefits, which would not otherwise be obtained, provides ample basis for predicating patentability of amended claims 1-7, 9, 12-15, 17-18, 29, and 32 over Graves, under the standard of *In re Geisler*, 116 F.3d at 1465, 1470, 43 USPQ2d at 1362, 1365 (Fed. Cir. 1997). [“The court in *Soni* summed up the rule of that case as follows: ‘[W]hen an applicant demonstrates substantially improved results, as Soni did here, and states that the results were unexpected, this should suffice to establish unexpected results *in the absence of evidence to the contrary.*’ citing *In re Soni*, 34 USPQ 2d 1684, 1688 (Fed. Cir. 1995). Emphases in the original.]

Applicant respectfully submits that the conditions of *Soni* have been satisfied in the present instance and that the Examiner has failed to provide objective evidence otherwise, as would be required to rebut the presumption that applicant’s recited improvement was indeed surprising and unexpected.

The Examiner’s reliance (see, e.g., the Office Action of July 20, 2005, section 14, page 16) on *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971) in making the foregoing anticipation rejection is submitted to be misplaced. In *Susi*, the court addressed an obviousness rejection under 35 USC 103, not an anticipation rejection under 35 USC 102. Applicant submits that the Examiner has further confounded the distinction between anticipation and obviousness rejections by suggesting the submission of an affidavit to establish unexpected results, while maintaining a rejection under 35 USC 102(b). See the July 20, 2005 rejection, section 14, at page 16, final 2 lines. Contrary to the Examiner’s

apparent understanding, applicant has not argued the novelty of the present claims by asserting that Graves's disclosed examples and preferred embodiments teach away from a broader disclosure or non-preferred embodiments. Rather, in response to an anticipation rejection under 35 USC 102(b), applicant has pointed to particular disclosures in Graves to establish that: (i) no disclosed species fall within applicant's claimed ranges; and (ii) no disclosure of applicant's particular ranges is provided. Inasmuch as the Examiner has further implied that certain claims might be obvious over Graves, applicant has provided additional remarks to establish that there is not even a suggestion in Graves of the present subject matter, including applicant's particular claimed ranges.

Absent any evidence to the contrary adduced by the Examiner, applicant maintains that the requirements of *Soni* and *Geisler, supra*, are satisfied, obviating any need for further evidence.

With reference to claims 2 and 3, Graves is said to teach that the glass fibers can comprise c-glass, t-glass, and e-glass (col. 10, lines 4-15). Such disclosure, however, falls short of defining any species within the limits of claim 1, from which claims 2 and 3 depend. With reference to claims 4 and 6, the Examiner has pointed to disclosure in Graves that the glass fibers can have a diameter between 3 and 30 microns (col. 10, lines 15-25). Such a range is far broader, however, than the 8 to 17 μm average fiber diameter delineated by claim 1, from which claims 4 and 6 depend. Even less is there any disclosure or suggestion of the narrower, preferred ranges of 10 to 16 μm (claim 4) or $11 \pm 1.5 \mu\text{m}$ (claim 6). With respect to

claims 5 and 7, the 1-75 mm fiber length range cited by the Examiner (col. 10, lines 15-25) far exceeds the 5 to 30 mm range in claim 5 and 6 to 12 mm range in claim 7, for which ranges there is no disclosure or suggestion in Graves. As to claims 12-13, the Examiner points to the 2-6 micron range disclosed at col. 9, lines 50-60. Significantly, Graves discloses that "larger fibers would perform adequately with this invention." Applicant respectfully submits that such disclosure points away from applicant's preferred ranges of "less than about 3.5 μm " of claim 12 and "less than about 1.9 μm " of claim 13. The Examiner refers to disclosure of a length of fine staple fibers having a length of 6-76 mm (col. 9, lines 50-60), again a range far wider than the "less than about 7 mm" range of claim 14.

With respect to claim 17, the Examiner has alleged that facer materials such as the one described by Graves are traditionally applied to both sides of a gypsum board. The Examiner has equated the mat disclosed by Graves with the first and second facers recited by applicant's claims.

As to claim 18, the Examiner points to Graves' disclosure of modified urea-aldehyde. As to claim 24, the Examiner points to Graves's disclosure of the formulation of additional ingredients into the latex and/or resin (col. 8, lines 44-50). It is respectfully submitted that the disclosures to which the Examiner refers fail to cure the lack of disclosure or suggestion of the other features of claim 1, on which claims 18 and 24 depend.

The Examiner has responded to applicant's argument that Graves fails to recognize the particular properties of the claimed mat by referring to *In re Heck*, 699 F.2d 1331, 1332-33,

216 USPQ 1038, 1039 (Fed. Cir. 1983), which states that "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). The Examiner additionally asserts that applicant does not claim these properties.

Applicant respectfully traverses the Examiner's position. It is agreed that Graves is relevant for all that it contains. However, in this instance, Graves fails to contain any disclosure or suggestion of the properties exhibited by applicant's mat. Such absence of disclosure is submitted to be highly pertinent. Applicant, on the other hand, has discovered properties exhibited by certain mats. Even if such mats are contained *arguendo* within the broad disclosure of Graves, their surprising and unexpected properties provide a clear predicate for patentability over Graves, notwithstanding any overlap. It is submitted that applicant is accorded wide latitude in how to claim his invention, and such properties need not be expressly recited. Moreover, certain of the desirable properties afforded by preferred embodiments of applicant's mat and gypsum board are expressly delineated by preferred claims, e.g. claims 28 and 32.

For at least these reasons, it is submitted that Graves does not disclose or suggest a gypsum or other hydraulic set board having the outstanding combination of structural and functional properties afforded by the gypsum board recited in present claims 1-7, 9, 12-15, 17-18, and 29, and the hydraulic set board of claim 33.

Accordingly, reconsideration of the rejection of Claims 1-7, 9, 12-15, 17-18, 29, and 33 under 35 U.S.C. 102(b) as being anticipated by Graves is respectfully requested.

Claims 28 and 32 stand rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as being obvious over Graves. It is said that the details of the rejection are set forth in paragraph 5 of the Office Action dated July 20, 2005.

As set forth hereinabove in connection with the 35 USC 102(b) rejection of Claims 1-7, 9, 12-15, 17-18, 29, and 33, applicant maintains that Graves fails to disclose or suggest every feature of claim 1, from which claim 28 depends. Independent claim 32 recites the same fiber dimensions and proportions as claim 1, which dimensions and proportions are also submitted not to be disclosed or suggested by Graves for the same reasons. In addition, claims 28 and 32 recite additional features, namely flame resistance and air permeability, respectively. The combination of the structural and functional limitations of claims 28 and 32 are clearly not disclosed or suggested by Graves.

While Graves admittedly discloses certain mats as being fire resistant, there is not even the slightest suggestion of an air permeability of at least about 250 cfm/ft² as recited by claim 32. The Examiner nevertheless has asserted that such properties may be presumed to be inherent and that the burden is upon applicant to prove otherwise under *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (C.C.P.A. 1980) and *In re Best*, 562 F.2d 1252, 195 USPQ 430 (C.C.P.A. 1977). The Examiner further points to footnote 4 of the *Best* decision for the

proposition that a rejection may be made alternatively for obviousness under 35 USC 103 or anticipation by inherency under 35 USC 102.

Applicant respectfully submits that the Examiner's reliance on *Fitzgerald* and *Best* is misplaced, inasmuch as the factual situation required for those cases to be apposite is not satisfied in the present instance.

Under MPEP §2144.04, legal precedent may be used as a basis for an obviousness rejection, but only if the facts in a prior legal decision are "sufficiently similar to those in an application under examination." However, the *Best* holding, which was affirmed by *Fitzgerald, supra*, was predicated on the substantial identicity of the claimed and prior art products. ["Where, as here, the claimed and prior art products are identical or substantially identical... the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product." *Best, supra*, at 1255, emphasis added]. In the present instance, therefore, the gypsum board of claim 28 and the fibrous mat of claim 32 must be substantially identical to the gypsum board and fibrous mat allegedly provided by the Graves disclosure for *Fitzgerald* and *Best* to be applicable.

Applicant respectfully traverses any such identification. The Examiner has admitted that Graves does not expressly disclose or suggest the claimed flame resistance or air permeability, but instead relies on the presumed inherency of such features in a gypsum board constructed using the Graves mat. As set forth hereinabove in connection with the 102(b) rejection of claim 1 over Graves, gypsum board employing mat comprising applicant's

particular blend of glass fibers is not disclosed or suggested by Graves. To the contrary, the preferred diameter ranges and the disclosed species all employ a much larger proportion of fine fibers than applicant's mat and the permissible range of fiber blends is far wider. As a result, it is submitted that there are substantial differences between any gypsum board disclosed or suggested by Graves and the board recited by claim 1, on which claim 28 depends, precluding application of *Fitzgerald* or *Best* in respect of claim 28, which requires the products to be substantially identical.

The Examiner alleges that support for the presumed inherency is found in the use of like materials (i.e. a gypsum board having a facer layer comprising a mixture of various diameter glass fibers and a binder which would result in the claimed properties. Applicant respectfully submits that this inherency argument falls short of the legal standard for such arguments under *Ex parte Schricker*, 56 USPQ 2d 1723, 1725 (B.P.A.I. 2000) (unpublished). [...when an examiner relies on inherency, it is incumbent on the examiner to point to the "page and line" of the prior art which justifies an inherency theory. Compare *In re Rijckaert*, 9 F.3d 1531, 1533, 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993) (when the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the prior art) (citing *In re Yates*, 663 F.2d 1054, 1057, 211 USPQ 1149, 1151 (C.C.P.A. 1981))]. Applicant also maintains that the Examiner's rejection does not rise to the comparable level of the test elucidated by the Board of Patent Appeals and Interferences in *Ex parte Skinner*, 2 USPQ2d 1788, 1789 (B.P.A.I. 1986). In particular, it is

submitted that the rejection does not provide sufficient evidence or scientific reasoning to establish the reasonableness of the Examiner's belief that the functional limitation is an inherent characteristic of the prior art Graves mat. The BPAI specifically requires such a showing before the requirement ("this burdensome task") to show the lack of inherency can be invoked, as it was in the present instance.

Absent a showing that the Graves mat is substantially identical to the claim 28 mat, it is maintained that the factual predicate of *Fitzgerald* and *Best* is not satisfied, so that burden to prove that the claimed properties are not exhibited by the Graves mat has not properly been shifted to applicant. Accordingly, it is submitted that the Examiner has not established a proper basis on which the rejection based on presumed inherency could properly be grounded.

The same argument is submitted also to be pertinent to the rejection of claim 32. Inasmuch as disclosure of the claimed air permeability is altogether absent from Graves, the implicit assertion of substantial identicity is even more strained.

In response to a previous rejection of claims 1-7, 9, 11-14, 18-23, 28-29, and 31-33 over US Patent 6,187,697 to Jaffee and US Patent 4,637,951 to Gill, applicant has addressed the matter of air permeability. Gill et al. discloses a fibrous glass mat that includes a majority of base fibers having a mean diameter in the range of 10 microns with a minor amount of microfibers (Abstract). Importantly, such a mat has a fiber content that also lies within the ranges delineated by Graves. However, the Gill et al. mat preferably has a porosity of no greater than 225 cubic feet per minute per square foot of mat as measured using the Frazier

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Air Permeability Test (Abstract). In other embodiments, the Gill et al. mat has even lower air permeability, e.g. 180 cubic feet/min (col. 5, line 59); and 40-225 cubic feet/min (claims 3 and 12). Such data clearly refute any presumption that all mats disclosed by Graves inherently have an air permeability of greater than about 250 cubic feet/minute/square foot, as delineated by claim 32. [“Before a reference can be found to disclose a feature by virtue of its inherency, one of ordinary skill in the art viewing the reference must understand that the unmentioned feature at issue is necessarily present in the reference. The test of inherency is not satisfied by what a reference ‘may’ teach. (‘Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.’) (*SGS-Thomson Microelectronics, Inc. v. International Rectifier Corp.*, 32 USPQ 2d 1496, 1503 (Fed. Cir.) (unpublished), *cert. denied*, 513 U.S. 1052 (1994), quoting *Continental Can*, 948 F.2d at 1268-69, 20 USPQ 2d at 1749-50.)

Applicant respectfully submits that the air permeability disclosure of Gill is equally applicable to mats disclosed by Graves and Jaffee. As set forth in the specification, e.g., at page 8, lines 23-25, a sufficiently high air permeability is needed to allow water from the gypsum slurry to be readily extracted during board formation. The Examiner may not properly dismiss the foregoing argument with respect to Gill by alleging that the applicant is required to show that the mat of Graves does not inherently have applicant’s air permeability range. Applicant continues to maintain the position that the burden of showing the prior art Graves mat does not have applicant’s claimed air permeability range has not been properly

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transferred to applicant under the *Best* and *Fitzgerald* standard. However, even if *arguendo* that burden has been shifted, it is submitted that the Gill teaching remains pertinent and rises to the level of any required showing, because mats disclosed by Gill contain fibers that clearly fall within the range delineated by Graves but fail to have the required 250 cfm/ft² air permeability.

In the present instance, the Examiner has not pointed to any disclosure or suggestion in Graves (or elsewhere) that differentiates the air permeability of mats broadly disclosed, at least some of which demonstrably lack the air permeability required by claim 32, from those made with the particular range of average glass fiber diameter recited by applicant. Accordingly, it is submitted that the preferred mat delineated by claim 32 is novel and unobvious over Graves.

For these reasons, it is submitted that Graves does not disclose or suggest a gypsum board or mat having the outstanding combination of properties afforded by the gypsum board recited by present claim 28 and the mat of claim 32.

Accordingly, reconsideration of the rejection of claims 28 and 32 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Graves is respectfully requested.

Claim 16 was rejected under 35 USC 103(a) as being unpatentable over Graves in view of US Patent 6,365,533 to Horner, Jr., et al., which relates to a low fiber, pliable facer

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suitable for use in insulation board manufacture. It is said that the details of the rejection are set forth in paragraph 7 of the Office Action dated May 31, 2005.

Applicant respectfully disagrees with the Examiner's position that Graves teaches the invention recited by claim 16, except for disclosure of a second face comprising kraft paper, as set forth hereinabove in connection with the 102(b) rejection of claims 1-7, 9, 12-15, 17-18, 29, and 33 over Graves. It is respectfully maintained that Horner, Jr., et al. does not cure the aforementioned deficiencies of Graves to render obvious the invention of claim 16.

For these reasons, and those set forth above, it is submitted that the combination of Graves and Horner, Jr., et al. does not disclose or suggest the gypsum board recited by present claim 16.

Accordingly, reconsideration of the rejection of claim 16 under 35 U.S.C. 103(a) as being obvious over the combination of Graves and Horner, Jr., et al. is respectfully requested.

Claim 26 was rejected under 35 USC 103(a) as being unpatentable over Graves in view of US Patent Publication US 2004/0209071 to Carbo et al., which discloses acoustical tiles, also known as acoustical panels, ceiling tiles, or ceiling panels, that are said to inhibit the growth of fungus, bacterial and other micro-organism.

The Examiner has asserted that Graves teaches the claimed invention but fails to teach that the core further comprises a biocide.

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Applicant respectfully disagrees that Graves teaches the claimed invention except for a biocide contained in the core, for at least the reasons set forth hereinabove in connection with the 102(b) rejection of claims 1-7, 9, 12-15, 17-18, 29, and 33 over Graves. Applicant further maintains that Carbo et al. fails to cure the lack of disclosure or suggestion of a gypsum board employing the nonwoven mat facers delineated by claim 1, from which claim 26 depends.

As a result, it is submitted that a combination of Graves and Carbo et al. does not disclose or suggest a gypsum board having the outstanding combination of properties afforded by the board recited by present claim 26.

Accordingly, reconsideration of the rejection of claim 26 under 35 U.S.C. 103(a) as being obvious over the combination of Graves and Carbo et al. is respectfully requested.

Claims 25 and 27 were rejected under 35 USC 103(a) as being unpatentable over Graves in view of US Patent 4,647,496 to Lehnert et al., which provides an exterior finishing system for a building, such as a fibrous mat-faced gypsum board having a water resistant, set gypsum core. It is said that the details of the rejection can be found in paragraph 10 [*sic – 9 was apparently intended*] of the Office Action dated May 31, 2005.

Applicant respectfully disagrees with the Examiner's position that Graves teaches the invention recited by claims 25 and 27, except for disclosure of a gypsum core comprising at least one water repellent agent as required by claim 25 and reinforcing fiber as required by claim 27. More specifically, for the reasons set forth hereinabove in connection with the

102(b) rejection of claims 1-7, 9, 12-15, 17-18, 29, and 33, applicant respectfully submits that Graves fails to disclose or suggest the non-woven fibrous mat facer required for the gypsum board of claim 1, on which claims 25 and 27 depend. Moreover, Lehnert et al. does not contain any disclosure or suggestion of the particular facer delineated by claim 1, and so fails to cure the deficiency of Graves. Applicant thus submits that even in combination, Graves and Lehnert et al. do not disclose or suggest the gypsum board delineated by claims 25 and 27.

Accordingly, reconsideration of the rejection of claims 25 and 27 under 35 U.S.C. 103(a) as being obvious over the combination of Graves and Lehnert et al. is respectfully requested.

Claims 1-7, 9, 11-14, 17-18, 23, 28-29, and 32-33 were rejected under 35 USC 103(a) as being unpatentable over US Patent 5,837,621 to Kajander in view of US Patent 4,637,951 to Gill. It is said that the details of the rejection can be found in paragraph 9 of the Office Action dated July 20, 2005.

Kajander discloses a fire resistant glass fiber mat. The fibers are coated with at least one nitrogen containing compound and at least one boron-containing compound and dried. A binder in the coating is cured. The resulting fibers are sheathed with a refractory material that protects the fibers and allows them to maintain integrity to higher temperatures and/or for longer times than untreated fibers.

The Examiner has pointed to col. 7, lines 10-25, which discloses glass fibers having diameters in the range of 3 to 20 microns and length up to about 3 inches (lines 27-28). In addition, the Examiner has cited Kajander's statement that fibers of different lengths and diameters can be used to get different characteristics in a known manner. (lines 26-27, emphasis added).

However, the Examiner has not pointed to any teaching in Kajander or elsewhere that would motivate a person having ordinary skill in the art to select the particular combination of fibers required by applicant's claims. The appeal to any "known manner" without any substantiation is submitted to be merely conclusory and insufficient as a documented basis under the standard of *In re Lee*, 277 F.3d 1338, 1344-45, 61 USPQ2d 1430, 1435 (Fed. Cir. 2002) (finding that reliance on "common knowledge and common sense" did not fulfill the PTO's obligation to cite references to support its conclusions, as the PTO must document its reasoning on the record to allow accountability and effective appellate review.)

Applicant further maintains that the Examiner has not established that the aforementioned "known manner" encompasses the characteristics afforded by the mat and gypsum board of applicant's claims. Applicant respectfully submits that the Kajander disclosure falls short of disclosing or suggesting any embodiments having the characteristics of applicant's facer and board, and does not provide any basis on which it could be concluded that one of ordinary skill would recognize such characteristics are known, or even that there

was a reasonable expectation such characteristics would be attained by any facer suggested by Kajander.

Admitting that Kajander fails to teach the particular fiber combination delineated by claim 1, viz. "a blend of a major portion composed of chopped glass fibers having an average fiber diameter ranging from about 8 to 17 μm and a minor portion composed of fine staple fibers having an average fiber diameter of less than about 5.5 μm , said minor portion being composed of glass or mineral fibers and comprising about 1-30 percent of the dry weight of the web", the Examiner has further cited Gill.

Gill is directed to a fibrous mat facer with improved strikethrough resistance. The mat is said to be especially suited as a carrier, substrate, or facer for various curable materials that are placed on one surface of the mat while in a liquid state. Gill et al. further discloses a laminate comprising the foregoing mat and a vinyl plastisol coating or a coating of a foam insulation material such as a polyurethane or polyisocyanurate foam. Conspicuously absent from the Gill et al. disclosure is any reference to gypsum or other cementitious construction board.

Applicant respectfully traverses the Examiner's alleged motivation for the modification of Gill required to satisfy the requirements of the instant claims. In particular, the Examiner has pointed to col. 3, lines 24-26, as suggesting the use of the present blend of fibers, alleging that a person of ordinary skill in the art would be motivated to use such a blend to create a mat having a non-abrasive and irritating hand. Applicant respectfully

submits that hindsight reconstruction is being employed. The context of col. 3, lines 24-26, clearly relates to the limits of 8 and 25 micron fiber diameters. In particular, it is maintained that "The coarser fibers" of lines 24-25 cannot relate to microfibers in the blend, which are not described until the paragraph following the statement (i.e., the paragraph at lines 27-58). Moreover, the cited statement elucidates the basis on which the upper limit of 25 microns is set, which relates to the "hand or feel of the final mat material" (line 24). Gill et al. clearly regards mat incorporating fibers having a 25 micron diameter as being sufficiently free of any feel that is abrasive or irritating. Moreover, there is no indication in the recited passage that the hand and feel of the mat relate to the microfiber content.

On the other hand, the Examiner has extrapolated Gill et al.'s specific teaching to assert a motivation to form a mat containing much smaller chopped glass fibers (i.e., fibers having a diameter of at most 17 microns), in combination with specified microfibers. It is respectfully submitted that the Examiner's assertion goes far beyond the scope of what a person having ordinary skill in the art would understand from the Gill et al. disclosure. More specifically, applicant maintains that the Examiner's apparent association of the effects of microfibers on the properties of finished mat and board, which Gill et al. does not address, must be regarded as impermissible hindsight reconstruction possible only in light of applicant's own teaching.

Furthermore, applicant respectfully points to the test data of Example 6, in which smoothness of gypsum board made with blended glass fiber mats of Examples 3 and 5, in

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accordance with the invention, is compared to the smoothness of board made with a mat comprising only chopped glass fibers, i.e. the mat of Comparative Example 1. Significantly, the mat of Comparative Example 1 is made with glass fibers having an average diameter of 13 microns, about half the upper diameter limit regarded as providing mat regarded by Gill et al. as producing mat with acceptably low abrasiveness and irritation. As delineated at page 20, lines 1-5, and contrary to what a skilled artisan would infer from Gill et al., it is surprising and unexpected that despite the low diameter of the Comparative Example 1 fiber, significant improvement is still exhibited by boards employing the blended-fiber mats of Example 3 and 5, even though the base fibers used therein are only marginally smaller (i.e. 11 micron) than the Example 1 mat with 13 micron fiber. Moreover, the data of Example 6 also show the surprising and unexpected result that the smoothness of the mat prior to incorporation in gypsum board is not predictive of the properties of the finished board. See, e.g., page 20, lines 5-7.

The Examiner further relies on *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), contending that applicant's selection of the particular mat formulation recited represents merely the discovery of an optimized value of a result-effective variable. Applicant disagrees, and submits that the reliance on *Boesch* is misplaced. It is submitted that the Examiner has not identified any disclosure or suggestion that the alleged result effect variable in fact has the effect of producing smooth board. As set forth above, Gill's disclosure pertains only to large diameter fiber (i.e. fiber of greater than 25 micron diameter),

whereas applicant's mat employs a major portion of a fiber that is 8-17 microns in diameter. There is a conspicuous absence of any recognition that the amount of microfiber present is any result-effective variable, as required for *Boesch* to be applicable. To the contrary, applicant points to the Federal Circuit's holding in *In re Chu*, 36 USPQ 2d 1089, 1095 (Fed. Cir. 1995), that technical evidence relating to the frailty of fabric filters during pulse-jet cleaning clearly countered the assertion that placement of the catalyst in the baghouse was merely a "design choice." Specifically, the Court held that Chu's evidence regarding the violent "snapping" action during pulse-jet cleaning, the difficulty in stitching compartments including the capacity to withstand high temperatures, and problems encountered from variable path lengths due to settling of the catalyst particles in each compartment militated against a conclusion that placement of the SCR catalyst was merely a "design choice." In the present instance, applicant maintains that smoothness, even in light of Kajander and Gill et al., is clearly a result; not a design choice that the skilled worker can readily "dial up" on command. See also *In re Gal*, 980 F.2d 717, 25 USPQ2d 1076 (Fed. Cir. 1992) wherein a finding of "obvious design choice" was precluded where the claimed structure and the function it performed were different from the prior art.) In the present instance, Gill et al. requires a hold-out additive/resin binder combination that is effective to prevent wetting and penetration of porous mat by a settable fluid substance (col. 4, lines 35-39). On the other hand, the presence of such a combination in applicant's gypsum mat would be incompatible with the bonding that is required between the mat and the adjacent gypsum core.

The Examiner has again relied on *Best* and *Fitzgerald* to assert that the burden has shifted to applicant to demonstrate that the recited properties are not inherent in the mat constructed in accordance with the combined disclosure of Kajander and Gill. It is respectfully submitted that the factual predicate of *Best* and *Fitzgerald* is again not satisfied, the Kajander/Gill mat not being demonstrably substantially identical to that of claims 1-7, 9, 11-14, 17-18, 23, 28-29, and 32-33.

Accordingly, applicant respectfully requests that the rejection of 1-7, 9, 11-14, 17-18, 23, 28-29, and 32-33 under 35 USC 103(a) as being unpatentable over Kajander in view of Gill be withdrawn.

Claim 16 was rejected under 35 USC 103(a) as being unpatentable over Kajander in view of Gill and further in view of Horner. It is said that the details of the rejection can be found in paragraph 10 of the Office Action dated July 20, 2005.

The Examiner has indicated that Kajander in view of Gill et al. teaches the invention recited by claim 16, except for disclosure of a second face comprising kraft paper. For the reasons set forth hereinabove in connection with the 102(b) rejection of claims 1-7, 9, 11-14, 17-18, 23, 28-29, and 32-33 over Kajander in view of Gill et al., applicant disagrees. It is respectfully maintained that Horner, Jr., et al. does not cure the aforementioned deficiencies of Kajander in view of Gill et al. to render obvious the invention of claim 16.

For these reasons, and those set forth above, it is submitted that the combination of Kajander, Gill et al., and Horner, Jr., et al. does not disclose or suggest the gypsum board recited by present claim 16.

Accordingly, applicant respectfully requests that the rejection of claim 16 under 35 USC 103(a) as being unpatentable over Kajander in view of Gill et al. and further in view of Horner be withdrawn.

Claim 26 was rejected under 35 USC 103(a) as being unpatentable over Kajander in view of Gill et al. and further in view of Carbo et al. It is said that the details of the rejection can be found in paragraph 10 [*sic - 11 was apparently intended*] of the Office Action dated July 20, 2005.

The Examiner has asserted that Kajander in view of Gill teaches the claimed invention but fails to teach that the core further comprises a biocide.

Applicant respectfully disagrees for the reasons set forth above in connection with the rejection of claims 1-7, 9, 11-14, 17-18, 23, 28-29, and 32-33 under 35 USC 103(a) as being obvious over Kajander and Gill. Inasmuch as claim 26 depends from claim 1, it is submitted that claim 26 is also patentable for at least the same reasons.

Accordingly, applicant respectfully requests that the rejection of claim 26 under 35 USC 103(a) as being unpatentable over Kajander in view of Gill et al. and further in view of Carbo et al. be withdrawn.

Claims 25 and 27 were rejected under 35 USC 103(a) as being unpatentable over Kajander in view of Gill et al. and further in view of Lehnert et al. It is said that the details of the rejection can be found in paragraph 12 of the Office Action dated July 20, 2005.

Applicant respectfully disagrees with the Examiner's position that the combination of Kajander and Gill teaches the invention recited by claims 25 and 27, except for disclosure of a gypsum core comprising at least one water repellent agent as required by claim 25 and reinforcing fiber as required by claim 27. More specifically, for the reasons set forth hereinabove in connection with the 103(a) rejection of claims 1-7, 9, 11-14, 17-18, 23, 28-29, and 32-33, applicant respectfully submits that even in combination, Kajander and Gill fail to disclose or suggest the non-woven fibrous mat facer required for the gypsum board of claim 1, on which claims 25 and 27 depend. Neither does Lehnert et al. contain any disclosure or suggestion of the particular facer delineated by claim 1. Consequently, the Lehnert et al. teaching fails to cure the deficiency of Kajander and Gill. Applicant thus submits that even in combination, Kajander, Gill, and Lehnert et al. do not disclose or suggest the gypsum board delineated by claims 25 and 27.

Accordingly, reconsideration of the rejection of claims 25 and 27 under 35 U.S.C. 103(a) as being obvious over the combination of Kajander, Gill, and Lehnert et al. is respectfully requested.

Claims 1-7, 9, 11-14, 18-23, 28-29, and 31-33 were rejected under 35 USC 103(a) as being unpatentable over US Patent 6,187,697 to Jaffee et al. in view of US Patent 4,637,951 to Gill. It is said that the details of the rejection can be found in paragraph 13 of the Office Action dated July 20, 2005.

Jaffee et al. is directed to fibrous nonwoven multiple layer mats having at least two layers with a body portion layer and a surface portion layer having fine fibers and/or particles therein, both layers being bonded together and to each other with a same resin binder. Preferably most or essentially all of the particles and/or fibers in the surface layer are larger than openings between the fibers in the body portion of the mat. The Examiner has particularly pointed to disclosure of fibers at least 0.25 inches long. In addition, it is said that mixtures of fibers of different lengths and/or fiber diameters can be used (col. 5, lines 34-35). While the use of fibrous nonwoven mats as facers for gypsum board is disclosed generally by Jaffee et al. at col. 1, lines 34-36, there is a conspicuous absence of any disclosure or suggestion that the inventive mat be so used. Rather, the only board-like products with which the mat's use is suggested are combustible materials, such as the various wood-based products delineated at col. 9, lines 35-38 and recited by claims 6 and 7. In marked contrast to the single-layer mat used in applicant's claimed gypsum board, the Jaffee et al. mat is a two-layer mat, including both a glass fiber body layer and a surface layer comprising fibers and/or particles. The Examiner has not pointed to any disclosure or suggestion in the Jaffee et al. reference that the particular types of fibers recited be used in any single layer type of mat.

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Applicant respectfully submits that even in combination with Gill et al., as the Examiner has proposed, there is no teaching that would lead a person having ordinary skill to substantially reconstruct the Jaffee et al. mat by eliminating the required surface portion of the mat. Applicant's mat and gypsum board faced therewith, as recited by present claims 1-7, 9, 11-14, 18-23, 28-29, and 31-33, do not have such a surface portion. It is respectfully submitted that the need for such substantial reconstruction is strong evidence that the present mat and gypsum board are not obvious over the references applied. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Importantly, Jaffee et al. articulates the long-felt need for a smooth surfaced mat, as set forth at col. 2, line 14. However, Jaffee et al. clearly addresses the surface issue in an altogether different way, i.e. by provision of a surface layer differentiated in structure and composition from the glass fiber matrix of the rest of the mat. Accordingly, no disclosure or suggestion can be drawn from Jaffee et al. that provides any basis for predicting that the problem of a smooth surface would reasonably be expected to be overcome by use of applicant's choice of mat structure, which is formed into a single, undifferentiated layer.

The Examiner has countered that a "two-layered mat can be considered to be 'a layer.'" Applicant respectfully submits that a person having ordinary skill in the art would not regard the Jaffee mat as being "a layer." In particular, the Examiner's reading is submitted to be untenable in light of the Jaffee reference taken as a whole, as is required under 35 USC

§103(a). While the term "a single layer" is admittedly not explicitly used by applicant, the skilled artisan would regard Jaffee as teaching a structure having a differentiated surface, including layers having different substructures. No motivation is provided to modify the Jaffee reference in the manner apparently envisioned by the Examiner, i.e. to eliminate a required substructure, resulting in an undifferentiated surface region, as provided by applicant's claimed gypsum board.

Recognizing that Jaffee fails to teach the particular combination of chopped glass fibers and fine staple fibers recited by applicant's claims, the Examiner has again pointed to Gill et al., and maintains that it would be obvious to use the claimed mixture of fibers allegedly disclosed by Gill et al. in the mat of Jaffee to create a facer with improved strikethrough and skin irritation problems.

Applicant respectfully traverses this motivation. As set forth hereinabove in connection with the combination of Gill with Kajander, it is submitted that the motivation articulated evidences impermissible hindsight reconstruction, because Gill et al.'s discussion of skin irritation is directed only to fibers having diameter greater than 25 microns, and so is not pertinent to the chopped fibers of applicant's mat, which have diameter of 8-17 microns. Even less does Gill et al. recognize any role of microfibers in regard to skin irritation.

Moreover, the improved strikethrough resistance cited by the Examiner would motivate a person having ordinary skill in the art to avoid the proposed combination. In the production of gypsum board, the gypsum is initially deposited onto the facer in the form of an aqueous

slurry with a substantial excess of water. It is essential that the facers have sufficient permeability to permit that excess water to be extracted through the facer. On the other hand, Gill et al. is directed to mat said to be suitable for polyurethane and polyisocyanurate insulating foam materials, for which waterproofing is a key performance criterion. One of ordinary skill in the art would recognize that a low permeability is desired for such an application. Significantly, Gill et al. teach air permeability, as measured by the Frazier Air Permeability Test, as being a criterion for distinguishing the effective amount of microfiber to be employed. Col. 5, lines 23-26. In particular, the Gill et al. Examples delineate Frazier Air Permeability Test results of 180 cubic feet/min (col. 5, line 59) and 220 cubic feet/min (col. 6, lines 4-5). Claims 2, 3, 10, and 12 recite preferred mats and laminates wherein the air permeability is either no more than about 225 cubic feet/min or between about 40 and 225 cubic feet/min. The recitation of an upper limit for air permeability further reinforces the Gill et al. teaching that lower permeabilities are desired. Applicant, on the other hand, recites mats that include preferred embodiments wherein the air permeability is at least about 250 cubic feet/minute, and more preferably at least 300 cubic feet/minute (see e.g. page 12, line 29 to page 13, line 10; Table IV; and claim 32.) As a result, applicant would be led away from the proposed combination.

Furthermore, applicant respectfully maintains that the Examiner has misconstrued the argument concerning air permeability in connection with Jaffee and Gill. In particular, it is submitted that applicant's argument demonstrates that at least some mats constructed in

accordance with the combined disclosure of Jaffee and Gill do not have an air permeability of at least 250 cfm/ft². The demonstration of at least some mat species lacking the 250 cfm/ft² permeability conclusively establishes that the claimed permeability is not inherent in a Jaffee mat.

Applicant respectfully submits that the Examiner's dismissal of the foregoing argument with respect to Gill is improper, it being alleged that the applicant is required to show that the mat of Jaffee does not inherently have applicant's air permeability range. Applicant continues to maintain the position that the burden of showing the prior art Jaffee mat does not have applicant's claimed air permeability range has not been properly transferred to applicant under the *Best* and *Fitzgerald* standard. However, even if *arguendo* that burden has been shifted, it is submitted that the Gill teaching remains pertinent and rise to the level of any required showing, because mats disclosed by Gill contain fibers that clearly fall within the range delineated by Jaffee.

In the present instance, the Examiner has not pointed to any disclosure or suggestion in Jaffee (or elsewhere) that differentiates the air permeability of mats broadly disclosed, at least some of which lack the air permeability required by claim 32, from those made with the particular range of average glass fiber diameter recited by applicant. Accordingly, it is submitted that the preferred mat delineated by claim 32 is novel and unobvious over Jaffee.

Moreover, it is submitted that, even if proper, the combination of Jaffee with Gill et al. would not disclose or suggest applicant's mat and gypsum board. In particular, the

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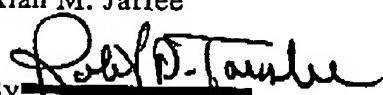
Examiner has failed to point to any disclosure or suggestion in Gill et al. that would motivate a person of ordinary skill in the art to construct a mat lacking the surface layer required by Jaffee, which is not present in applicant's mat. Significantly, it is the surface layer of the Jaffee mat that is responsible for the character of the hand and surface roughness of the Jaffee mat, not the particular fiber combination chosen; this obviates the very motivation for the combination on which the Examiner relies.

Accordingly, applicant respectfully requests that the rejection of 1-7, 9, 11-14, 18-23, 28-29, and 31-33 under 35 USC 103(a) as being unpatentable over Jaffee et al. in view of Gill be withdrawn.

In view of the foregoing remarks, it is respectfully submitted that the present application has been placed in allowable condition. Reconsideration of the rejection of claims 1-7, 9, 11-23, 25-29, and 31-33 and allowance of the present application are, therefore, earnestly solicited.

Respectfully submitted,

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